

**REMARKS**

**Status of the Claims**

Claims 1-34, 37-39, and 42-44 are presently pending. By this Amendment, claims 1, 14, 19, 24, 30, 37, and 42 have been amended. Support for these amendments can be found in the originally filed specification, for example at page 14, lines 10-13. No new matter has been added.

**Allowable Subject Matter**

Applicant thanks the Examiner for acknowledging that claims 4 and 6-7 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Rejections Under 35 U.S.C. §102**

The standard under 35 U.S.C. §102 is one of strict identity. "Under 35 U.S.C. §102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim." *Getcher v. Davidson*, 116 F.3d 1454, 1457 (Fed. Cir. 1997). "Every element of the claimed invention must be literally present, arranged as in the claim." *Richardson v. Suzuki Motor Col., Ltd.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). Applicant respectfully submits that the cited references fail to anticipate the present invention for at least the following reasons.

**Udelhofen**

Claim 37 is rejected under 35 U.S.C. § 102(b) as being anticipated by Udelhofen (U.S. Patent No. 4,231,759, hereinafter "Udelhofen"). See page 2 of the Office Action.

Claim 37 presently recites a method for reducing combustion chamber deposits and/or intake valve deposits in an engine comprising providing a fuel containing an

additive comprising a composition selected from the group consisting of hydrocarbyl succinic anhydrides reacted with amines, Mannich adducts derived from hydrocarbyl-substituted phenols reacted with formaldehydes and amines, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups reacted with amines, copolymers of unsaturated acids and polyolefins reacted with amines, and acid or ester functionalized hydrocarbon polymers reacted with amines, wherein the amines comprise treated aliphatic or aromatic amines. The claim also provides particular features of the treated amines.

*Udelhofen* discloses reaction products obtained from the Mannich condensation of high molecular weight alkyl-substituted hydroxy aromatic compounds, amines and aldehydes (see Abstract), yet fails to teach or suggest treated amines. Accordingly, *Udelhofen* fails to anticipate the present invention. Applicant respectfully requests reconsideration and withdrawal of the rejection.

Daly

Claims 37-38 are rejected under 35 U.S.C. § 102(b) as being anticipated by Daly (U.S. Patent No. 5,873,917, hereinafter "Daly"). See page 2 of the Office Action. As discussed above, claim 37 recites a method for reducing combustion chamber deposits and/or intake valve deposits comprising the claimed composition. The claim provides particular features of the compositions, including treated aliphatic or aromatic amines and specific aspects thereof.

*Daly* discloses a nitrogen-containing dispersant, including Mannich dispersants, which can be formed by reacting an alkyl-substituted hydroxyaromatic compound, formaldehyde, and an amine. See col. 7, lines 47-48 and col. 8, lines 1-19. Yet *Daly*

fails to teach or suggest treated amines, as presently recited. Accordingly, *Daly* fails to anticipate the present invention. Applicant respectfully requests reconsideration and withdrawal of the rejection.

**Rejections Under 35 U.S.C. §103**

**Kamakura**

Claims 1-3, 5, 8-9, 11-12, 14-16, 18-21 and 42-44 are rejected under 35 U.S.C. § 102(b) as allegedly being obvious by Kamakura (JP 1-95194, hereinafter "Kamakura"). See page 2 of the Office Action. Applicant traverses this rejection for at least the reasons of records, as well as the following.

*Kamakura* discloses a polyamine obtained by the addition of acrylonitrile to the N atom in a compound represented by formula [1], and hydrogenation thereof. See page 1, Claim 1 of Excerpted English Translation. In particular, Manufacturing Example 1 discloses the reaction product of acrylonitrile and a single amine, triethylene tetramine. See *id.* at page 2. Yet *Kamakura* fails to teach or suggest a mixture of amines, much less a mixture of amines comprising tetraethylene pentamine, pentaethylene hexamine, hexaethylene heptamine, and compounds having the structure  $H_2NCH_2CH_2(NHCH_2CH_2)_xNH_2$ , wherein x is 3 or higher. The reference further fails to teach or suggest aminoguanidine bicarbonate, heavy polyamines, or hydroxyamines. Instead, *Kamakura* discloses reacting a single polyamine represented by formula [1] with acrylonitrile. See page 1 of Excerpted English Translation. *Kamakura* is notably silent with regard to a mixture of amines, much less the particular mixture of amines presently claimed. Accordingly, *Kamakura* fails to teach or suggest the present

invention. Applicant respectfully requests reconsideration and withdrawal of the rejection.

*Bardasz in view of Kamakura*

Claims 24-28, 30, 32-33 and 39 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Bardasz (U.S. Patent No. 5,595,964, hereinafter "Bardasz") in view of *Kamakura*. See pages 2-3 of the Office Action. Applicant traverses this rejection for at least the reasons of records, as well as the following. Applicant notes that claim 39 depends from non-rejected claim 9. Accordingly, claim 39 is patentable at least by virtue of its dependency from patentable claim 9.

The Examiner has admitted that *Bardasz* does not disclose the specific reaction product recited in the present claims. See page 5 of the Office Action dated 9-3-2008. The Examiner has instead relied on *Kamakura* for supplying this missing teaching. *Id.* However, as discussed above, *Kamakura* fails to teach or suggest the presently claimed dispersant at least because the reference fails to teach or suggest treated amines a mixture of amines, much less a mixture of amines comprising tetraethylene pentamine, pentaethylene hexamine, hexaethylene heptamine, and compounds having the structure  $H_2NCH_2CH_2(NHCH_2CH_2)_xNH_2$ , wherein x is 3 or higher. *Kamakura* further fails to teach or suggest aminoguanidine bicarbonate, heavy polyamines, or hydroxyamines. For at least the reasons above, *Kamakura* fails to overcome the deficiency in *Bardasz*. Therefore, the present invention is not obvious in light of the combination of references. Applicant respectfully requests reconsideration and withdrawal of the rejection.

Robson in view of Kamakura

Claims 10, 17, 22, 24-30 and 32-34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Robson et al. (U.S. Patent No. 6,060,437, hereinafter "Robson") in view of *Kamakura*. See page 3 of the Office Action. Applicant traverses this rejection for at least the reasons of records, as well as the following. Applicant notes that claim 10 depends from non-rejected claim 1; claim 17 depends from non-rejected claim 14; and claim 22 depends from non-rejected claim 19. Accordingly, claims 10, 17, and 22 are patentable at least by virtue of their dependency from patentable claims 1, 14, and 19, respectively.

The Examiner has admitted that *Robson* does not disclose the specific reaction product recited in the present claims, but has instead relied on *Kamakura* for supplying this missing teaching. See page 5 of the Office Action dated 9-3-2008. But as discussed above, *Kamakura* fails to teach or suggest *Kamakura* fails to teach or suggest the presently claimed dispersant at least because the reference fails to teach or suggest treated amines a mixture of amines, much less a mixture of amines comprising tetraethylene pentamine, pentaethylene hexamine, hexaethylene heptamine, and compounds having the structure  $H_2NCH_2CH_2(NHCH_2CH_2)_xNH_2$ , wherein x is 3 or higher. *Kamakura* further fails to teach or suggest aminoguanidine bicarbonate, heavy polyamines, or hydroxyamines. Accordingly, *Kamakura* fails to overcome the deficiency in *Robson*. Therefore, the present invention is not obvious in light of the combination of references. Applicant respectfully requests reconsideration and withdrawal of the rejection.

Russo in view of Kamakura

Claims 13 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Russo et al. (U.S. Patent No. 5,286,264, hereinafter "Russo") in view of *Kamakura*. See page 3 of the Office Action. Applicant traverses this rejection for at least the reasons of records, as well as the following. Applicant notes that claim 13 depends from non-rejected claim 1; and claim 23 depends from non-rejected claim 14. Accordingly, claims 13 and 23 are patentable at least by virtue of their dependency from patentable claims 1 and 14, respectively.

Further, the Examiner has admitted that *Russo* does not disclose the specific reaction product recited in the present claims, but has instead relied on *Kamakura* for supplying this missing teaching. See page 6 of the Office Action dated 9-3-2008. Yet as discussed above, *Kamakura* fails to teach or suggest the presently claimed reaction product at least because the reference fails to teach or suggest treated amines a mixture of amines, much less a mixture of amines comprising tetraethylene pentamine, pentaethylene hexamine, hexaethylene heptamine, and compounds having the structure  $H_2NCH_2CH_2(NHCH_2CH_2)_xNH_2$ , wherein x is 3 or higher. *Kamakura* further fails to teach or suggest aminoguanidine bicarbonate, heavy polyamines, or hydroxyamines. Accordingly, *Kamakura* fails to overcome the deficiency in *Russo*. Therefore, the present invention is not obvious in light of the combination of references. Applicant respectfully requests reconsideration and withdrawal of the rejection.

Srinivasan in view of Kamakura

Claims 24 and 30-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Srinivasan et al. (U.S. Patent No. 5,571,445, hereinafter "Srinivasan") in view of *Kamakura*. See page 3 of the Office Action.

The Examiner has admitted that *Srinivasan* does not disclose the specific succinimide recited in the present claims, but has instead relied on *Kamakura* for supplying this missing teaching. See pages 6-7 of the Office Action dated 9-3-2008. However, and as discussed above, *Kamakura* fails to teach or suggest the presently claimed dispersant at least because the reference fails to teach or suggest treated amines a mixture of amines, much less a mixture of amines comprising tetraethylene pentamine, pentaethylene hexamine, hexaethylene heptamine, and compounds having the structure  $H_2NCH_2CH_2(NHCH_2CH_2)_xNH_2$ , wherein x is 3 or higher. *Kamakura* further fails to teach or suggest aminoguanidine bicarbonate, heavy polyamines, or hydroxyamines. Accordingly, *Kamakura* fails to overcome the deficiency in *Srinivasan*. Therefore, the present invention is not obvious in light of the combination of references. Applicant respectfully requests reconsideration and withdrawal of the rejection.

CONCLUSION

Applicant respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing all claims into condition for allowance. Applicant submits that the proposed amendments of claims 1, 14, 19, 24, 30, 37, and 42 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, at least because all of the elements and their relationships claimed were

either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicant respectfully points out that the final action by the Examiner presented some new arguments as to the application of the art against Applicant's invention. It is respectfully submitted that the entering of the Amendment would allow the Applicant to reply to the final rejections and place the application into condition for allowance.

Finally, Applicant submits that entry of the amendment would place the application into better form for Appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicant submits that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references applied against this application. Applicant therefore requests the entry of this Amendment, the Examiner's reconsideration of the application, and the timely allowance of the pending claims.

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 50-2961.



Respectfully submitted,

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By:   
Cynthia Lan Martin  
Reg. No. 62,960

Carol L. Cole  
Reg. No. 43,555

MH2 TECHNOLOGY LAW GROUP LLP  
1951 Kidwell Drive  
Suite 550  
Tysons Corner, VA 22182  
Phone: (703) 917-0000  
Facsimile: (703) 997-4905